

DEVICE FOR ENHANCING WELL-BEING***TECHNICAL FIELD OF THE INVENTION***

This invention relates to a device for enhancing the well-being of humans and any animals who can be made to use the device.

The term "well-being" is chosen to include the alleviation of disease and other physiological problems, as well as to improve performance in many aspects of life such as sport and other functions; and also to contribute to the regulation of the immune system.

In a particular application of the invention the treatment of asthma and emphysema has been examined.

BACKGROUND ART

Research has been carried out on the absorption or adsorption of oxygen to the iron sites of the haemoglobin molecule. Thus, oxygen molecules cross the alveolar-capillary membrane and are dissolved in the plasma. The amount of dissolved oxygen in the plasma is known to be important and it is the haemoglobin that is responsible for the amount of oxygen in the blood. Approximately 1.3 ml of oxygen dissolve in 1 gm of haemoglobin.

It is an object of the present invention to provide a device which maximises the entry of oxygen into the plasma and attachment of oxygen onto the haemoglobin cells to form oxy- haemoglobin.

DISCLOSURE OF THE INVENTION

According to the invention a device is provided which includes an inlet for oxygen or air and an outlet, preferably in the form of a mouthpiece, and a means for providing an electromagnetic field such as a magnetic field between the inlet and the outlet, the magnetic field being sufficient to induce paramagnetism to the oxygen.

In a preferred form of the invention the magnetic field is created by a permanent magnet, electromagnet or other source of magnetic field in the device, and the strength of the magnetic field is preferably but not limited to the order of 1,500 gauss to 3,000 gauss.

The arrangement of inlet and mouthpiece is designed for the person using the device to draw air through the device but it will be appreciated that means may be provided to assist the passage of the oxygen-containing gas through the device. This may be particularly useful in anaesthesiology by providing the patient with increased oxygen supply during anaesthetic procedures.

Experiments have shown that use of the device leads to a definite improvement to the immune system and there have also been exciting improvements in the enhancement of performance and well-being.

A number of surveys were conducted to support the effectivity of the invention.

Survey 1

Fourteen athletes were selected for the survey. Ten were supplied with a device (called TERAHALER) according to the invention and four were not.

The results are given in the following table.

Survey 2

This survey was conducted on 28 top class rugby players - 20 without TERAHALER and 8 using TERAHALER every 30 minutes.

The test used was the 20 m “Bleep Test” where a player is required to run 20 m between beacons, each lap a little faster than the last. When a participant cannot keep up the pace set by a bleep, he is disqualified.

The 28 players performed a total of 2643 laps (average 104 - 26 laps per player).

SURVEY 3

A quality of life study was completed by 45 asthmatic patients as required by protocol for Juniper Quality of Life Questionnaires (AQLQ).

The protocol was constructed as follows:

- a. 14 day observation period to ascertain the stability of the patients condition.
- b. 28 day intensive Therahaler therapy (every 30 mins).
- c. Second 28 day intensive Therahaler Therapy.
- d. 30 day maintenance Therahaler Therapy (6 x per day to establish whether the benefits gained in the 56 day intensive therapy period were lasting or not.
- e. Final patient check up - it is at this period that these patient feedback reports are filled in.

SURVEY 4

This survey was aimed to determine the effects of regular use of TERAHALER on arterial blood gas concentrations and T Cell numbers.

METHOD

1. 7 TERAHALER board members were recruited for the study.
2. Blood sampling involved taking an arterial blood sample from the radial artery and a venous sample from the brachial vein for T Cell analysis.
3. The arterial blood sample was analysed for the following parameters:
 - i) Partial pressure of oxygen (PO₂)
 - ii) Partial pressure of carbon dioxide (PCO₂)
 - iii) Oxy-haemoglobin percentage (O₂Hb)
 - iv) Carboxyhaemoglobin percentage (COHb)
 - v) Methaemoglobin percentage (metHb)
 - vi) Haemoglobin concentration (Hb)
4. The venous blood sample was analysed and the following counts were conducted:
 - i) CD3 Count
 - ii) CD4 Count
 - iii) CD8 Count
5. Baseline sampling (arterial and venous) was done on all subjects.
6. The test subjects were then instructed to use the TERAHALER every 5 minutes for the next two hours and repeat arterial sampling was conducted.
7. The subjects were then sent home and requested to use the TERAHALER as directed every 30 minutes while awake.
8. Further arterial and venous sampling was conducted.

PILOT BLOOD GAS INVESTIGATION RESULTS:

The object of the two tests was to investigate trends to gain a better understanding of how TERAHALER's magnetic field impacts blood physiology. The following findings were made:-

Oxy-haemoglobin: This showed a steady, incremental increase from a starting average of 93.69% to 94.75% four weeks later.

PO2 Levels: The test reveals a slight drop in PO2 levels over the four week period, but the third reading being rather erratic and should be ignored.

PCO2 Levels: Over the four week test, the levels remain almost constant, indicating that improvement in Oxy-haemoglobin levels are not as a result of hyperventilation.

Haemoglobin concentration G/dl: Here, surprisingly, small, but steady incremental increases in haemoglobin concentration from 15.33 to 15.83 were found. Normally, when oxy-haemoglobin levels increase haemoglobin levels decrease.

Conclusion: TERAHALER does improve blood oxygen levels without significantly disturbing blood CO2 levels.

SURVEY 5: Test for changes in Immunity level function Average Reading

Test Procedure: Seven trialists used the TERAHALER for a four week period and venous blood samples taken initially before TERAHALER usage, after two weeks, after four weeks. CD3, CD4, CD8 levels were noted at these intervals yielding the following results.

RESULTS

Conclusion: CD3 and CD4 counts show a significant improvement whilst CD8 shows moderate improvement. When these results are correlated with patient reports from Survey 3 Asthma trials, many patients reported large reductions and in some cases cessation of corticosteroid drug therapy combined with an increase resistance to flu and bronchitis.

SAFETY:

TERAHALER has no reported adverse effects during this test, or any previous tests, and has also proved to be completely compatible with all allotropic medicine regimes encountered to date. TERAHALER's safety and drug compatibility is one of the device's many outstanding features.

CLAIMS:

1. An inhaler device including an inlet for oxygen or air and an outlet adapted for connection to the breathing system of a human characterised in that means are provided for creating an electromagnetic field between the inlet and the outlet, the field being sufficient to induce paramagnetism to the oxygen.
2. The device according to claim 1 characterised in that the electromagnetic field is a magnetic field.
3. The device according to claim 2 characterised in that the magnetic field is created by a permanent magnet.
4. The device according to claim 2 or claim 3 in which the magnetic field is of the order of 1500 to 3000 gauss.
5. The device according to any of the above claims characterised in that the outlet is in the form of a mouthpiece and is arranged together with the inlet to allow a user to draw air through the device.

ABSTRACT

An inhaling device is provided which has an inlet for oxygen or air containing oxygen, and an outlet in the form of a mouthpiece. A permanent magnet of strength between about 1500 and 3000 gauss is located between the inlet and the mouthpiece so that the user can draw oxygen through the device into the mouth past the magnet which induces paramagnetism to the oxygen.